

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application: Paul Mantz)	Examiner: Paul T Chin
)	
Serial No: 10/781,323)	Group Art Unit: 3652
)	
Filed: February 18, 2004)	Confirmation No: 9445
)	
Title: Endeffectors for Handling)	Deposit Account No: 04-1403
Semiconductor Wafers)	
)	Customer No: 22827

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Dear Sir:

In conjunction with the filing of a Notice of Appeal, Applicants respectfully request review of the basis of rejections of the pending claims.

I. Summary

Claims 1-7, 9-17, 19, 33-40, 42-46, 101, and 102, including independent claims 1, 33, 101, and 102 remain under consideration in the present application. Claims 21-32 and 47-100 have been withdrawn from consideration.

Independent claims 1, 33, 101 and 102 are all directed to an endeffector for handling semiconductor wafers. More specifically, for instance, claim 1 is directed to an endeffector comprising a base member, a plurality of support members, a pushing device, a biasing member, a pneumatic actuator and a suction device. Importantly, independent claims 1, 101 and 102 each require “a biasing member placed in association with the piston, **the biasing member biasing**

the piston towards its retracted position.” In addition, independent claims 33 and 101 each require “emergency pins having a height that is below the height of the support members, **wherein the emergency pins do not contact the wafer when the wafer is supported upon the support members.**”

In the Office Action dated January 29, 2009, independent claim 1 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,256,555 to Bacchi et al. in view of U.S. Patent Application Publication No. 2003/0102682 to Kurokawa or U.S. Patent No. 5,191,218 to Mori et al. Independent claims 33, 101 and 102 stand rejected under Bacchi et al. in view of U.S. Patent No. 6,095,582 to Siniaguine et al. Applicant respectfully requests review of the basis of rejection of the pending claims.

II. The Office Action has Failed to Show that Bacchi et al. Standing Alone, or in Combination with Any Other Reference, Teaches Each and Every Limitation of the Rejected Claims

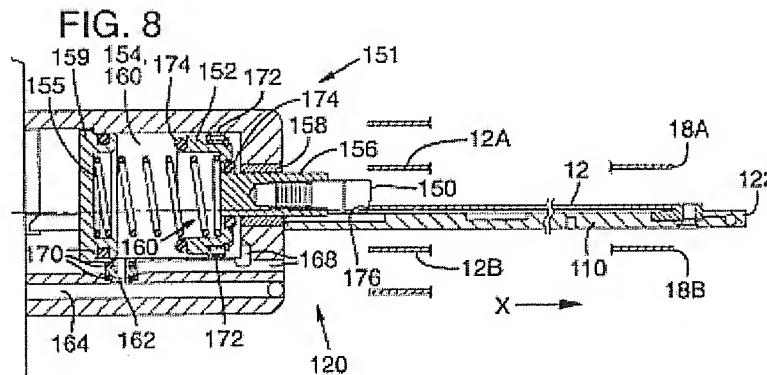
To establish a prima facie case of obviousness, the Office Action must show where all of the claimed limitations are taught or suggested in the prior art. MPEP § 2143.03. As stated in the Applicant’s Amendment filed October 14, 2008 the Office Action has failed to establish that Bacchi et al., either standing alone or in combination with any other reference, teaches or discloses each and every limitation of independent claims 1, 33, 101 or 102 or any of the rejected claims depending therefrom.

A. “biasing member biasing the piston towards its retracted position”

For instance, the Office Action has failed to establish that Bacchi et al., either standing alone or in combination with any other reference, teaches or suggests a biasing member biasing the piston **towards its retracted position.** Bacchi et al., in fact discloses just the opposite – a biasing member that biases a piston towards an extended position. Indeed, Bacchi et al. teaches

the use of a spring to extend an active contact point and vacuum pressure to retract the active contact point. This is directly opposite to independent claims 1, 101, and 102 and in fact teaches away from the subject matter of independent claims 1, 101 and 102.

The Office Action cites to Figure 8 of Bacchi et al. as teaching a biasing member biasing a piston towards its retracted position. In particular, the Office Action states “Exhibit A [Figure 8] teaches an inner piston (159), another piston (152), a pushing device (150), and a spring 155 capable of pushing against the piston 159 towards a retracted position.” (Jan. 29, 2009 Office Action, p. 6). Figure 8 of Bacchi et al. is reproduced below:



The “piston” 159 referred to by the Office Action as being biased towards a retracted position is actually an end cap 159. The end cap 159 is not movable between an extended position and a retracted position and therefore does not qualify as the piston of independent claims 1, 101, and 102. Indeed, the end cap 159 is stationary and “forms one wall of a vacuum chamber.” (Bacchi et al., col. 9, line 35). No reasonable interpretation of “piston movable between an extended position and a retracted position” can include the stationary end cap 159. In fact, because the end cap 159 is stationary, the end cap 159 does not have a retracted position and cannot be biased toward a retracted position. Thus, the Office Action has failed to show where Bacchi et al. discloses a biasing member that biases a piston towards its retracted position and has failed to establish a prima facie case of obviousness.

B. “emergency pins do not contact the wafer when the wafer is supported upon the support members”

In addition, the Office Action has failed to establish that the prior art teaches or suggests “emergency pins having a height below the height of the support members, wherein the emergency pins do not contact the wafer when the wafer is supported upon the support members.” The Office Action admits that Bacchi et al. does not show a “pair of pins to support a wafer.” (Jan. 29, 2009 Office Action, p. 5) The Office Action, however, cites U.S. Patent No. 6,095,582 to Siniaguine et al. as teaching a pair of high pins and another pair of pins to support a wafer. The Office Action does not, however, establish where the prior art teaches or discloses emergency pins having a height below the height of the support members, wherein the emergency pins do not contact the wafer when the wafer is supported upon the support members.

Indeed, the friction pins 140 of Siniaguine et al. are designed to contact the wafer on its horizontal bottom surface and act to impede the horizontal movement of the wafer and prevent the wafer from bumping against the vertical locator pins. (Siniaguine et al., col. 2, lines. 35-67). While Siniaguine et al. discloses that the vertical locator pins may or may not touch the wafer, Siniaguine et al. specifies the locator pins are of a greater height than the friction pins which support the bottom surface of the wafer. (Siniaguine et al., col. 2, lines. 63-64). In great disparity, the emergency pins of claims 33 and 101 are at a height below the height of the support members.

For at least the foregoing reasons, the applicant respectfully submits that the Office Action has failed to establish a prima facie case of obviousness and has improperly rejected claims 1-7, 9-17, 19, 33-40, 42-46, 101, and 102 under 35 U.S.C. § 103 as being obvious over Bacchi et al. Accordingly, applicant respectfully requests withdrawal of the present rejection and allowance of the pending claims.

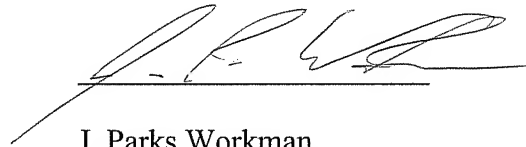
III. Conclusion

Thus, for at least the reasons set forth above, it is believed that the present application is in complete condition for allowance. However, Examiner Chin is invited and encouraged to telephone the undersigned, should any issues remain after consideration of this Pre-Appeal Brief Request for Review. A one month extension of time fee is included with this Pre-Appeal Brief Request for Review. Please charge any additional fees required by this Pre-Appeal Brief Request for Review to Deposit Account No. 04-1403.

Respectfully requested,

DORITY & MANNING, P.A.

Date: 5/29/2009



J. Parks Workman
Registration No. 60,382
P.O. Box 1449
Greenville, SC 29602-1449
Phone: (864) 271-1592
Facsimile: (864) 233-7342